Status of the JENDL Project

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General Purpose File

JENDL-4 is being developed for researches on innovative reactors, high burn-up and the use of MOX fuels for LWR, criticality safety considering burn-up credit, therapy, astrophysics, and so on. The library will include charged-particle and photon induced reaction data as well as spontaneous fission data for a limited number of nuclei in addition to neutron induced reaction data. The maximum incident energy can be extended to higher values than 20 MeV depending on data needs. Key subjects are as follows: extension of incident particles and energies, to solve problems with JENDL-3.3, improvement of minor actinide and FP data, and evaluations of covariances, fission product yields, gamma-ray production data and charged-particle spectra. Quality assurance is regarded as important for JENDL-4. The Japanese Nuclear Data Committee (JNDC) is responsible for production of reactor constants for typical applications such as continuous-energy Monte Carlo and multi-group transport calculations and burn-up calculations.

Special Purpose Files

Part of the JENDL High Energy Files will be released this year: the neutron- and proton-induced reaction data with top priority up to 3 GeV and photo nuclear reaction data. Evaluation of lower priority data continue. For the development of ADS, the Actinide File is being made to improve the accuracy of minor actinide data in JENDL-3.3. Furthermore, covariance data for some nuclei are also evaluated for ADS.

Developments of Codes and Data Utilization System

Optical and statistical model codes are developed in order to reflect recent advances in nuclear theory on data evaluations. For users' convenience, we are working on the development of the data utilization system consisting of retrieval, visualization, processing and dissemination. The system will be available on internet, and standard criticality and shielding benchmark tests can be performed in an easy way. The system will provide a convenient portal site for nuclear data users.

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